

BEACON Project No. 2178

**PASSIVE SOIL-GAS SURVEY
DATA REPORT**

**GRAND PRAIRIE TCE SITES
GRAND PRAIRIE, TX**

Prepared for

**Dynamac Corporation
1202 Executive Dr West
Richardson, TX 75081**

by



**Beacon Environmental Services, Inc.
323 Williams Street
Bel Air, MD 21014**

December 5, 2008

Applying Results from Soil-Gas Surveys

The utility of soil-gas surveys is directly proportional to their accuracy in reflecting and representing changes in the subsurface concentrations of source compounds. Passive soil-gas survey results are the mass collected from the vapor-phase emanating from the source. The vapor-phase is merely a fractional trace of the source, so, as a matter of convenience, the units used in reporting detection values from passive soil-gas surveys are smaller than those employed for source-compound concentrations.

The critical fact is that, whatever the relative concentrations of source and associated soil gas, best results are realized when the ratio of soil-gas measurements to actual subsurface concentrations remains as close to constant as the real world permits. It is the reliability and consistency of this ratio, not the particular units of mass (*e.g.*, nanograms) that determine usefulness. Thus, BEACON emphasizes the necessity of conducting — at minimum — follow-on intrusive sampling at one or two points that show relatively high soil-gas measurements to obtain corresponding concentrations of soil and groundwater contaminants. These correspondent values furnish the basis for approximating the required ratio. Once that ratio is established, it can be used in conjunction with the soil-gas measurements (regardless of the units adopted) to estimate subsurface contaminant concentrations across the survey field. It is important to keep in mind, however, that specific conditions at individual sample points, including soil porosity and permeability, depth to contamination, and perched ground water, can have significant impact on soil-gas measurements at those locations.

When passive soil-gas surveys are handled in this way, the data provide information that can yield substantial savings in drilling costs and in time. They furnish, among other things, a checklist of compounds expected at each survey location and help to determine how and where drilling budgets can most effectively be spent.

Table 1

Beacon Environmental Services, Inc.
323 Williams Street
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample Area Prefix:		DFSG 01	DFSG 02	DFSG 03	DFSG 04	DFSG 04 D
Client Sample ID:	Meth_BI					
Project Number:	2178	2178	2178	2178	2178	2178
Lab File ID:	08112903	08112942	08112943	08112944	08112945	08112946
Received Date:		11/26/2008	11/26/2008	11/26/2008	11/26/2008	11/26/2008
Analysis Date:	11/29/2008	11/30/2008	11/30/2008	11/30/2008	11/30/2008	11/30/2008
Analysis Time:	13:40	1:46	2:04	2:23	2:42	3:00
Units:	ng	ng	ng	ng	ng	ng

COMPOUNDS

Dichlorotetrafluoroethane (Freon 114)	<25	<25	<25	<25	<25	<25
Vinyl Chloride	<25	<25	<25	<25	<25	<25
Dichlorodifluoromethane (Freon 12)	<25	<25	<25	<25	<25	<25
Trichlorofluoromethane (Freon 11)	<25	<25	<25	<25	<25	<25
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
112-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	11 J	7 J
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	186	138
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
Trichloroethene	<25	432	167	44	2,394	2,460
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	100	42	<25	29	46
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
Bromoform	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25
TPH C ₅ -C ₉	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500
TPH C ₁₀ -C ₁₅	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

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Table 1

Beacon Environmental Services, Inc.
323 Williams Street
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample Area Prefix:	DFSG	DFSG	DFSG	DFSG
Client Sample ID:	05	06	08	09_Trip-6
Project Number:	2178	2178	2178	2178
Lab File ID:	08112947	08112948	08112949	08112950
Received Date:	11/26/2008	11/26/2008	11/26/2008	11/26/2008
Analysis Date:	11/30/2008	11/30/2008	11/30/2008	11/30/2008
Analysis Time:	3:19	3:37	3:56	4:15
Units:	ng	ng	ng	ng
COMPOUNDS				
Dichlorotetrafluoroethane (Freon 114)	<25	<25	<25	<25
Vinyl Chloride	<25	<25	12 J	<25
Dichlorodifluoromethane (Freon 12)	<25	<25	<25	<25
Trichlorofluoromethane (Freon 11)	<25	<25	<25	<25
1,1-Dichloroethene	76	10 J	<25	<25
112-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25
trans-1,2-Dichloroethene	88	28	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25
1,1-Dichloroethane	23 J	<25	<25	<25
cis-1,2-Dichloroethene	5,475	530	19 J	<25
Chloroform	31	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25
Benzene	<25	<25	<25	<25
Trichloroethene	13,925	4,884	139	<25
1,1,2-Trichloroethane	<25	<25	<25	<25
Toluene	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25
Tetrachloroethene	286	95	13 J	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25
Bromoform	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25
TPH C ₅ -C ₉	<2,500	<2,500	<2,500	<2,500
TPH C ₁₀ -C ₁₅	<2,500	<2,500	<2,500	<2,500

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

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**PASSIVE SOIL-GAS SURVEY
FIELD DEPLOYMENT REPORT**

Project Information	
Beacon Project No.:	2178
Site Name:	Grand Prairie TCE Site
Site Location:	Grand Prairie, TX



Client Information	
Company Name:	Dynamac Corporation
Office Location:	Richardson, TX
Samples Collected By:	

FIELD SAMPLE ID	Date Emplaced	Date Retrieved	Sampling Hole Depth (inches)	FIELD NOTES (e.g., asphalt/concrete/gravel, description of sample location, PID/FID readings)		
	Time Emplaced	Time Retrieved				
DFSG01	1432	1017	36	Location 01	32 45 02.740	96 57 47.021
DFSG02	1438	1020	36	Location 02	45 02.781	57 46.466
DFSG03	1429	1022	36	Location 03	45 02.718	57 45.872
DFSG04	1428	1024	36	Location 04	45 02.753	57 45.303
DFSG04D	1428	1024	36	Location 04 Dup		
DFSG05	1424	1027	36	Location 05	45 02.298	57 45.341
DFSG06	1415	1030	36	Location 06	32 45 01.843	57 45.399
DFSG07				Location 07		not collected
DFSG08	1435	1039	36	Location 08	45 00.758	57 45.414

**CHAIN-OF-CUSTODY
PASSIVE SOIL-GAS SAMPLES**

Project Information		Client Information	
Beacon Project No.:	2178	Company Name:	Dynamac Corporation
Site Name:	Grand Prairie TCE Site <i>DelPrae</i>	Office Location:	Richardson, TX
Site Location:	Grand Prairie, TX	Samples Submitted By:	<i>David Anderson</i>
Analytical Method:	EPA Method 8260B	Contact Phone No.:	214 377 2006
Target Compounds:	Beacon Project Number 2178 Target Compound List		

Field Sample ID	Lab Sample ID (for lab use only)	Comments (only necessary if problem or discrepancy)			
		Condition of sample or vial	Date	Time	Initial
DFSG01	2178 DFSG01				
DFSG02	2178 DFSG02				
DFSG03	2178 DFSG03				
DFSG04	2178 DFSG04				
DFSG04D	2178 DFSG04D				
DFSG05	2178 DFSG05				
DFSG06	2178 DFSG06				
DFSG07		not collected			
DFSG08	2178 - DFSG08				
DFSG09	2178 - Trip-blk				

Shipment of Field Kit to Site — Custody Seal # 0745281, 0745283

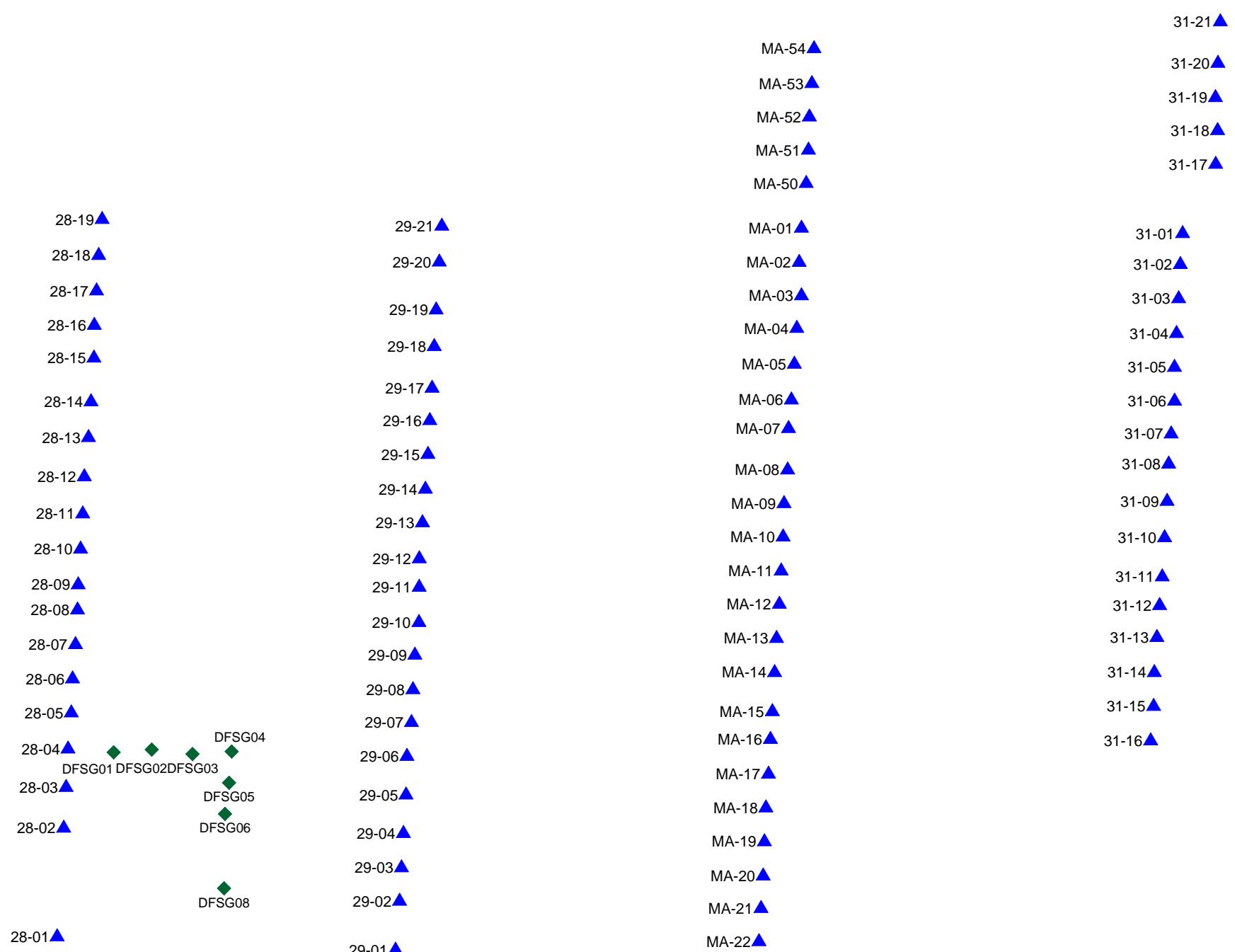
Intact? Y N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
<i>Ryan Snel</i>	11-12-2008 / 1700 Hours	FedEx	<i>David Anderson</i>	11/13/08 1035

Shipment of Field Kit to Laboratory — Custody Seal # 0745282

Intact? Y N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
<i>David Anderson</i>	11/25/08 1700	FedEx	<i>Stevie Bromley</i>	11.26.08 1000

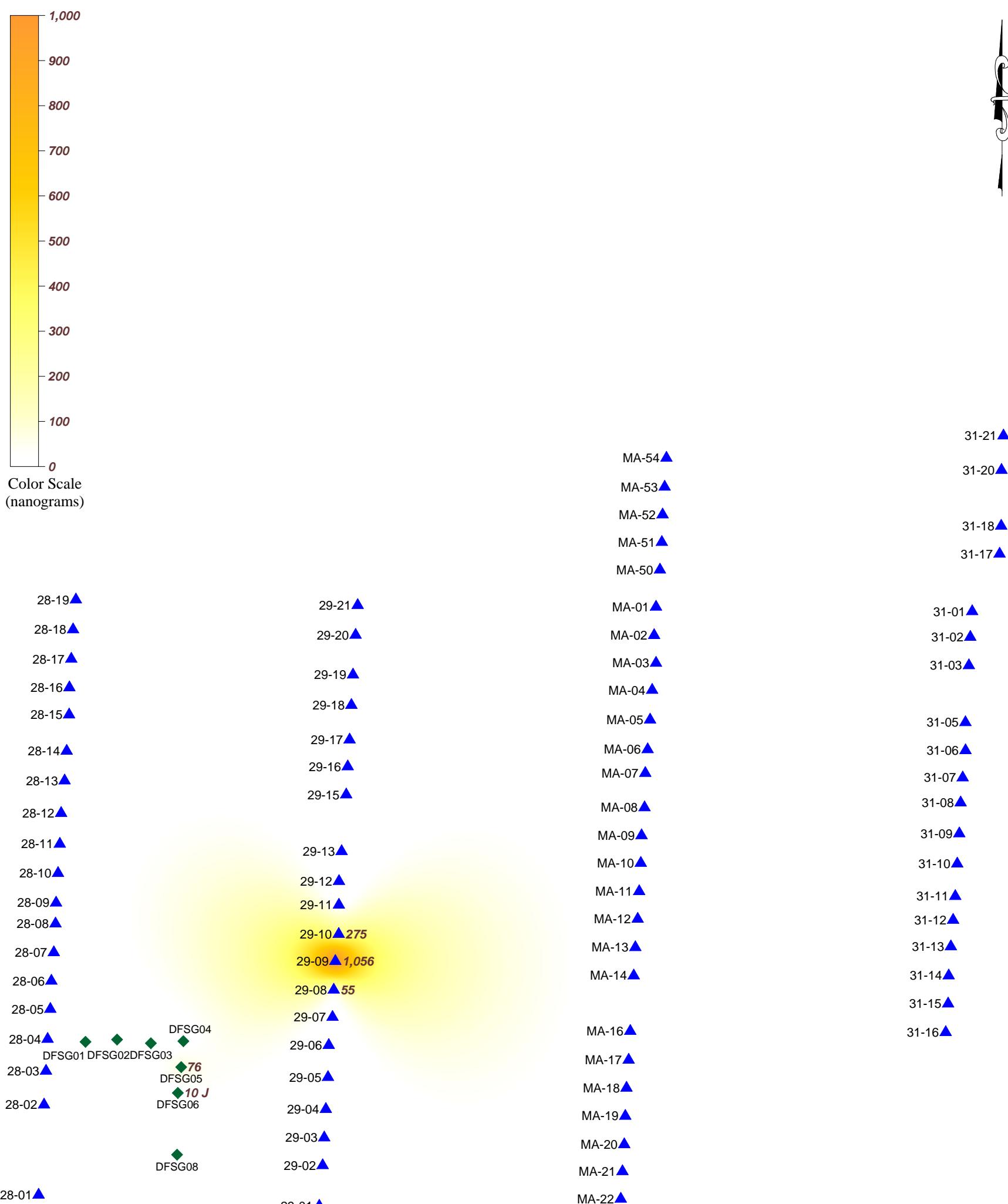


DFSG08◆ PASSIVE SOIL-GAS SAMPLE LOCATION (November 2008)

MA-08▲ PASSIVE SOIL-GAS SAMPLE LOCATION (August 2008)

Approximate Scale in Feet





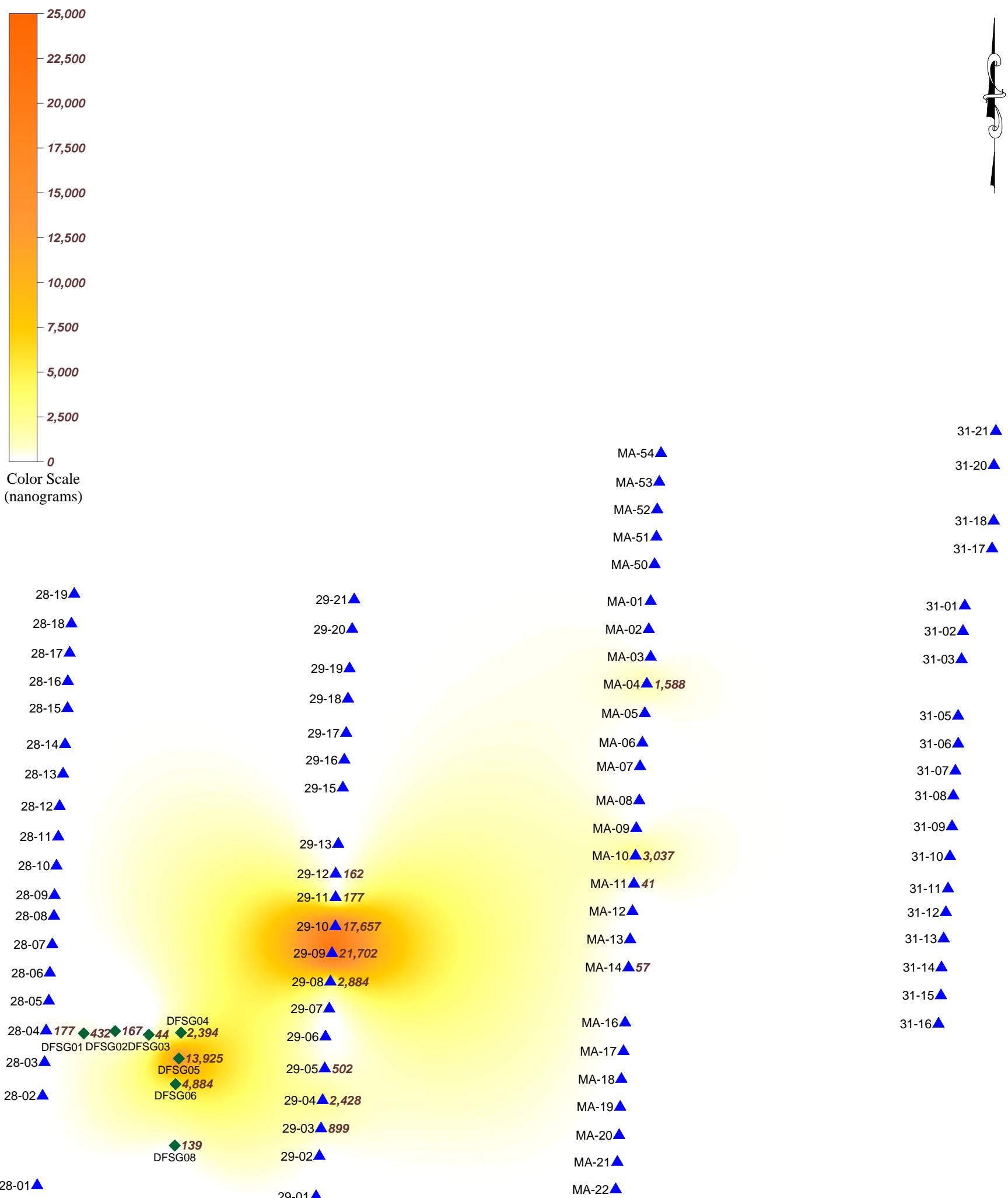
10 J 1,1-DICHLOROETHENE (in nanograms, J = Estimated Value)

DFSG08◆ PASSIVE SOIL-GAS SAMPLE LOCATION (November 2008)

MA-08▲ PASSIVE SOIL-GAS SAMPLE LOCATION (August 2008)

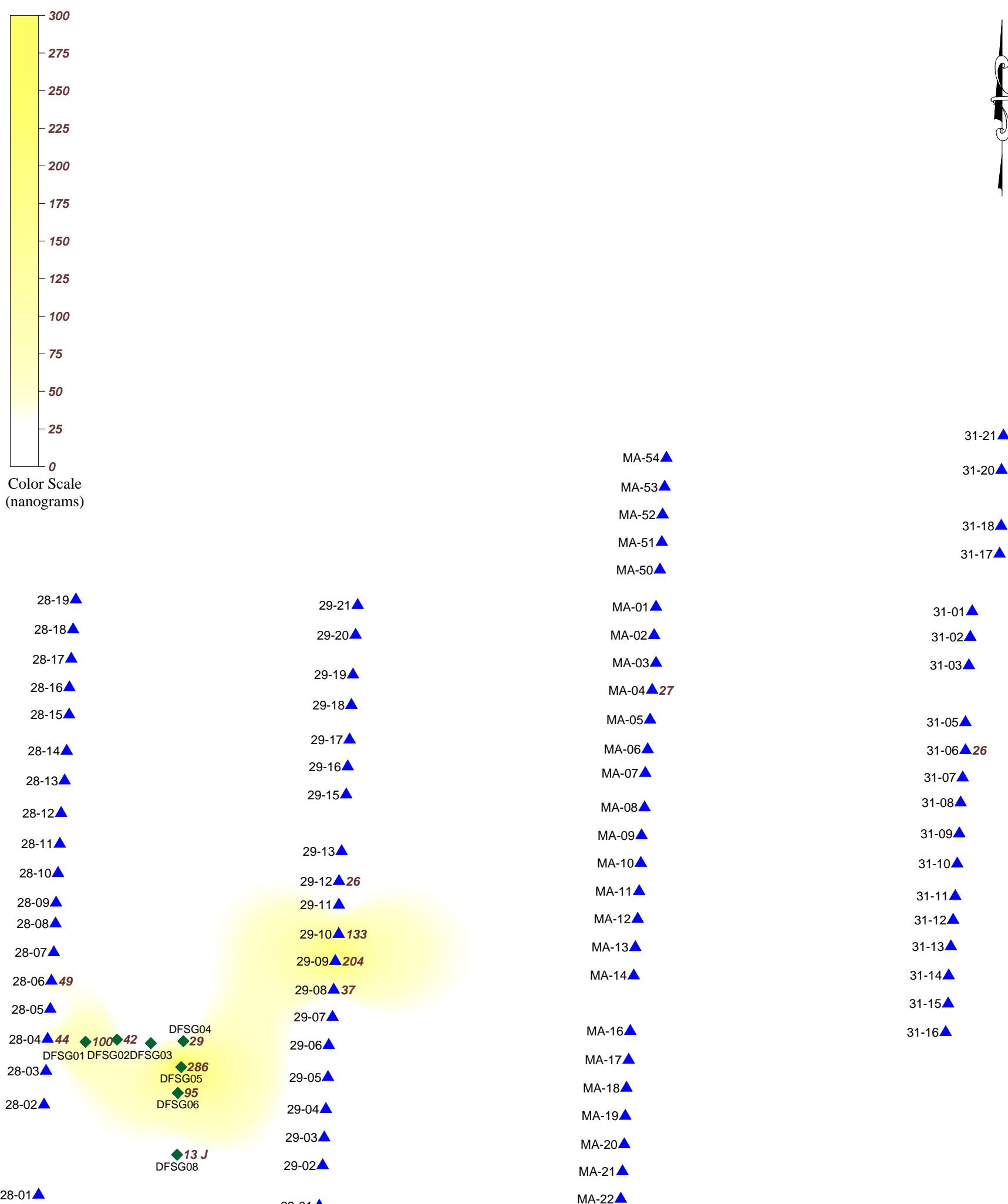
Approximate Scale in Feet





Approximate Scale in Feet

0 200 400



13 J TETRACHLOROETHENE (in nanograms J = Estimated value)

DFSG08◆ PASSIVE SOIL-GAS SAMPLE LOCATION (November 2008)

MA-08▲ PASSIVE SOIL-GAS SAMPLE LOCATION (August 2008)

Approximate Scale in Feet



Figure 2-3
Passive Soil-Gas Survey
Tetrachloroethene

Delfasco Gorge TCE Site
Grand Prairie, TX